

Material Safety Data Sheet

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Version 1.3

According to 91/155/EEC

1 - Product and Company Information

Product Name	RIBOFLAVIN
Product Number	R4500
Company	Sigma-Aldrich Pty, Ltd Unit 2, 14 Anella Avenue Castle Hill NSW 1765
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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
(-)-RIBOFLAVIN	83-88-5	201-507-1	None

Formula	C17H20N4O6
Molecular Weight	376.37 AMU
Synonyms	Beflavine * 6,7-Dimethyl-9-D-ribitylisoalloxazine * Flavaxin * Flaxain * Hyflavin * HYRE * Isoalloxazine, 7,8-dimethyl-10-D-ribityl- * Isoalloxazine, 7,8-dimethyl-10-(D-ribo-2,3,4,5-tetrahydroxypentyl)- * Lactoflavin * Lactoflavine * Ribipca * Riboderm * Riboflavin * Riboflavinequinone * Vitamin B2 * Vitamin G

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Not hazardous according to Directive 67/548/EC.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

AFTER SKIN CONTACT

In case of contact, immediately wash skin with soap and copious amounts of water.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is

conscious. Call a physician.

5 - Fire Fighting Measures

EXPLOSION DATA

Dust Potential: This material, like most materials in powder form, is capable of creating a dust explosion.

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Wear dust mask.

Hand Protection: Protective gloves.

Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance

Color: Deep yellow
Form: Powder

Property

Value

At Temperature or Pressure

pH

N/A

BP/BP Range

N/A

MP/MP Range	290 °C
Flash Point	N/A
Flammability	N/A
Autoignition Temp	N/A
Oxidizing Properties	N/A
Explosive Properties	N/A
Explosion Limits	N/A
Vapor Pressure	N/A
SG/Density	N/A
Partition Coefficient	N/A
Viscosity	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
Evaporation Rate	N/A
Bulk Density	N/A
Decomposition Temp.	N/A
Solvent Content	N/A
Water Content	N/A
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	N/A

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions of Instability: Light sensitive. May decompose on exposure to moist air or water. Light.

Materials to Avoid: Strong oxidizing agents, Reducing agents, Bases, Calcium, Metallic salts.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Phosphorous oxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: VJ1400000

ACUTE TOXICITY

LD50

Oral

Rat

> 10000 mg/kg

LD50

Intraperitoneal

Rat

560 MG/KG

Remarks: Behavioral: Food intake (animal). Kidney, Ureter, Bladder: Urine volume decreased. Nutritional and Gross Metabolic: Weight loss or decreased weight gain.

LD50

Subcutaneous

Rat

5 GM/KG

LD50
Intravenous
Rat
50 MG/KG

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion: May be harmful if swallowed.

CHRONIC EXPOSURE - MUTAGEN

Hamster
300 MG/L
Cell Type: lung
Cytogenetic analysis

Hamster
100 MG/L
Cell Type: lung
SLN

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

Non-hazardous for road transport.

IMDG

Non-hazardous for sea transport.

IATA

Non-hazardous for air transport.

15 - Regulatory Information

Not hazardous according to Directive 67/548/EC.

COUNTRY SPECIFIC INFORMATION

Germany
WGK: 1

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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